

STATE OF NEW HAMPSHIRE
Before the
PUBLIC UTILITIES COMMISSION

Verizon New Hampshire Investigation
into Cost of Capital

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DT 02-110

Direct Testimony
of
James A. Rothschild

on behalf of

Freedom Ring Communications, L.L.C. d/b/a BayRing Communications and
Conversent Communications of New Hampshire, LLC

PUBLIC (REDACTED) VERSION

January 27, 2003

Direct Testimony of James A. Rothschild

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1 **I. STATEMENT OF QUALIFICATIONS OF JAMES A. ROTHSCHILD**

2

3 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

4 A. My name is James A. Rothschild and my address is 115 Scarlet Oak Drive,
5 Wilton, Connecticut 06897.

6

7 Q. WHAT IS YOUR OCCUPATION?

8 A. I am a financial consultant specializing in utility regulation. I have experience
9 in the regulation of electric, gas, telephone, sewer, and water utilities
10 throughout the United States.

11

12 Q. PLEASE SUMMARIZE YOUR UTILITY REGULATORY EXPERIENCE.

13 A. I am President of Rothschild Financial Consulting and have been a consultant
14 since 1972. From 1979 through January 1985, I was President of Georgetown
15 Consulting Group, Inc. From 1976 to 1979, I was the President of J.
16 Rothschild Associates. Both of these firms specialized in utility regulation.
17 From 1972 through 1976, Touche Ross & Co., a major international
18 accounting firm, employed me as a management consultant. Touche Ross &
19 Co. later merged to form Deloitte & Touche. Much of my consulting at
20 Touche Ross was in the area of utility regulation. While associated with the
21 above firms, I have worked for various state utility commissions, attorneys
22 general, and public advocates on regulatory matters relating to regulatory and
23 financial issues. These have included rate of return, financial issues, and
24 accounting issues. (See JAR Exhibit 1.)

25

1 Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

2 A. I received an MBA in Banking and Finance from Case Western University
3 (1971) and a BS in Chemical Engineering from the University of Pittsburgh
4 (1967).

5

6 **II. PURPOSE**

7

8 Q. WHAT IS THE PURPOSE OF THIS TESTIMONY?

9 A. The purpose of this testimony is to present forward-looking cost of capital
10 data that should be used by Verizon – New Hampshire for the determination
11 of the proper rates for UNE service.

12

13 **III. SUMMARY OF FINDINGS AND RECOMMENDATIONS**

14

15 Q. PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS.

16 A. Following are my findings and recommendations in this proceeding. The
17 basis for each of these conclusions is explained in detail later in the
18 testimony:

19

- 20 1. The overall forward-looking cost of capital that is being incurred by
21 Verizon New Hampshire to service its UNE investment is 6.93%.
22 This is based upon the consolidated capital structure of Verizon
23 Communications, Inc. which contains 31.74% common equity,
24 18.80% short-term debt, 49.46% long-term debt, a cost of equity of

1 10.00%, a cost of long-term debt of 6.43%, and a cost of short-term
2 debt of 2.00%. See JAR Exhibit 3 Schedule 1, Page 1.

- 3 2. The actual capital structure financing the operations of Verizon New
4 Hampshire, including the UNE investment, consists of 31.74%
5 common equity 49.46% long-term debt and 18.80% short-term debt.
6 This capital structure is the actual consolidated capital structure of
7 Verizon Communications, Inc, the parent of Verizon New
8 Hampshire. This consolidated capital structure is the only capital
9 structure that was directly chosen by management to minimize the
10 overall cost of capital in providing telecommunications service, and is
11 the capital structure used by rating agencies such as Standard &
12 Poor's. The reported capital structure of Verizon New Hampshire
13 does not represent the actual capital structure financing of New
14 Hampshire regulated operations and it does not reflect the capital
15 structure management would choose if it were designing a capital
16 structure that it believed to be most appropriate for the regulated
17 telephone operations in New Hampshire. In addition, the reported
18 capital structure of Verizon New Hampshire does not represent the
19 actual capital structure financing the operations of Verizon New
20 Hampshire because all of the common equity and some of the debt
21 that finances the operations of Verizon New Hampshire is issued by
22 Verizon Communications, Inc.

23 In a recent UNE case, the Verizon Communications consolidated
24 capital structure was used to determine the overall cost of capital.
25 This was in a Verizon New Jersey case. In so ruling, the New Jersey
26 Board of Public Utilities (BPU) rejected the company's proposal to
27 use the Verizon New Jersey reported capital structure. The use of the

1 consolidated Verizon capital structure was a new approach for the
2 New Jersey BPU. In prior telephone cases, the BPU had used the
3 New Jersey reported capital structure.

- 4 3. The cost of equity being incurred by Verizon New Hampshire to
5 service its UNE investment is 10.00%. This conclusion was based
6 upon the implementation of the DCF method and Risk
7 Premium/CAPM method to a group of telecommunications
8 companies. The result was confirmed by comparing the results to
9 those obtained for a group of electric companies, a group of gas
10 distribution companies, and a group of water utility companies. This
11 10.00% cost of equity recommendation is the same as the 10.0% cost
12 of equity the New Jersey BPU adopted based upon my testimony in
13 that proceeding. In addition, this 10.0% cost of equity
14 recommendation is conservatively high for this proceeding for two
15 primary reasons. First, interest rates have dropped since the time my
16 New Jersey testimony was prepared and filed in the New Jersey
17 proceeding. Tellingly, since that time, long-term interest rates on US
18 treasury bonds actually dropped by approximately 1% (one hundred
19 basis points). Second, my cost of equity recommendation in this case
20 is conservatively high is because it gives some weight to analysts'
21 forecasts even though analysts' forecasts are more optimistic than the
22 consensus of equity investors. As this Commission is likely well
23 aware, equity investors have suffered through approximately three
24 years of bad times caused at least in part by a continual string of
25 earnings disappointments, particularly in the telecommunications
26 industry.

1 4. The non-diversifiable risk (the only kind of risk that impacts the cost
2 of equity) is lower for the UNE business than for Verizon New
3 Hampshire as a whole. The UNE business is pure incremental
4 business to Verizon New Hampshire, as it does not make any
5 incremental investment in order to be able to service the UNE business
6 (See Verizon's response to BR/Conv. 1-10). Furthermore, the retail
7 regulated customers and not investors are the ones that pay for the risk
8 of carrying spare capacity. Even though the risks of providing UNE
9 service are lower than for Verizon's retail regulated telephone
10 business, I have not specifically made any downward adjustment to my
11 cost of capital recommendation to account for the lower risk

12
13 5. To apply my recommended cost of capital in this proceeding to
14 regulated retail rates, the only change that would have to be made is
15 to modify the cost of long-term debt from the forward-looking cost
16 of debt to the embedded cost of debt. Because long-term interest
17 rates are lower today than in prior years, using a forward-looking cost
18 of debt results in a lower overall cost of capital than would the
19 embedded cost of debt.

20
21 Q. DOES YOUR COST OF EQUITY RECOMMENDATION INCLUDE THE
22 IMPACT OF A POSSIBLE ELIMINATION OF THE INCOME TAX ON
23 STOCK DIVIDENDS?

24 A. No. At this time, the tax law change is only a proposal. Therefore, the
25 elimination of the income tax on dividends is speculative. However, if the
26 tax law should be changed to substantially cut or eliminate the income tax on
27 dividends, this would result in a material reduction to the cost of equity of

1 Verizon New Hampshire. Therefore, if the income tax rate is changed prior
2 to the time a decision is rendered in this case, the Commission should find a
3 cost of equity for Verizon that is substantially lower than the cost of equity I
4 have recommended in this case.

5
6 **IV. OVERALL COST OF CAPITAL**

7
8 Q. WHAT IS THE FAIR COST OF CAPITAL TO APPLY TO VERIZON
9 NEW HAMPSHIRE'S INVESTMENT IN UNEs?

10 A. As shown in JAR Exhibit 3, Schedule 1, Page 1, the overall cost of capital
11 that is proper to apply to Verizon New Hampshire's UNE investment is
12 6.73%. This consists of a cost of equity of 10.00%, a current cost of long-
13 term debt of 6.43%, a current cost of short-term debt of 2.0%. It is also based
14 upon the actual capital structure of Verizon Communications Inc., which
15 consists of 31.74% common equity, 49.46% long-term debt and 18.80%
16 short-term debt.

17
18 Q. IS USING THE ACTUAL CAPITAL STRUCTURE OF VERIZON
19 COMMUNICATIONS FORWARD-LOOKING AND TELRIC
20 COMPLIANT?

21 A. Yes. The actual capital structure of Verizon Communications contains a
22 conservatively high estimate of the amount of common equity Verizon
23 Communications should be expected to utilize in the future. The lower
24 interest rates that prevail today mean that as the embedded cost of debt comes
25 down, the company will be able to carry an increasing amount of debt without
26 having its interest expense increase.

1

2 **V. CAPITAL STRUCTURE**

3

4 Q. YOU HAVE RECOMMENDED THAT THE CONSOLIDATED CAPITAL
5 STRUCTURE OF VERIZON BE USED TO MEASURE THE ACTUAL
6 COST OF CAPITAL ASSOCIATED WITH VERIZON NEW
7 HAMPSHIRE'S PROVISION OF UNE SERVICES. WHAT IS THAT
8 CAPITAL STRUCTURE.

9 A. As of 12/31/2001, the actual capital structure of Verizon Communications,
10 Inc. consolidated consisted of 33.58% common equity. The common equity
11 ratio had declined to 31.7% as of 6/30/02. My source for this capital structure
12 information is the 2001 10 K report and the 2nd quarter 2002 10 Q report of
13 Verizon Communications as submitted to the U.S. Securities and Exchange
14 Commission. A copy of the balance sheet data from the financial reports
15 obtained on the Yahoo website is attached to this testimony as JAR Exhibit 4.
16 These balance sheets were compared and found to be the same as those
17 available on the SEC website, but the SEC website report could not be
18 attached because it did not print properly.

19

20 Q. WHY SHOULD THE COMMISSION USE THE VERIZON
21 COMMUNICATIONS CONSOLIDATED CAPITAL STRUCTURE FOR
22 COST OF CAPITAL AND EARNINGS TESTING PURPOSES?

23 A. Ideally, the Commission should use the capital structure for Verizon New
24 Hampshire that would produce the lowest overall cost of capital in the long-

1 run¹ for the UNE operations of Verizon New Hampshire. It is a basic
2 principle of finance that the lower the business risk of a company, the greater
3 amount of debt it can safely use in its capital structure. When the level of
4 debt is increased, there is a corresponding decrease in the amount of equity.
5 Business risk impacts the amount of debt a company can prudently carry
6 because debt payments have to be made in accordance with the contract (or
7 bond indenture) in both good times and bad times. If a company should fail
8 to make its debt payments or the company's bondholders could force the
9 company into bankruptcy. Therefore, a lower business risk lowers the chance
10 that the company could experience problems in making its debt payments.

11

12 Q. HOW DOES THE FORWARD-LOOKING NATURE OF THE CAPITAL
13 STRUCTURE SELECTION IN THIS PROCEEDING IMPACT YOUR
14 DECISION TO USE THE CONSOLIDATED ACTUAL PER BOOKS
15 CAPITAL STRUCTURE OF VERIZON COMMUNICATIONS, INC?

16 A. The consolidated capital structure reflects management's choice as to the
17 appropriate capital structure. When financial conditions change, there can be
18 somewhat of a lag in the time it takes for management to fully reflect current
19 conditions. Now, interest rates are extremely low. These lower interest rates
20 drive the cost of debt down, making it more economical for the company to
21 issue debt. Therefore, the use of the Verizon Communications, Inc.
22 consolidated capital structure as a proxy for the forward-looking capital
23 structure produces a capital structure with a conservatively high percentage of

¹ Most companies with an investment bond rating could lower their overall cost of capital in the short-run merely by adding more debt. In the long-run, however, adding debt will only lower the overall cost of capital if the higher financial risk and the related higher cost of debt and equity associated with using more debt financing will not offset the cost benefits of replacing equity with debt.

1 common equity. The consolidated capital structure is appropriate for the
2 regulated telecommunications operations of Verizon New Hampshire because
3 it best reflects what management believes will produce the lowest overall cost
4 of capital in the long-run, and it is appropriate for UNEs because it is the
5 capital structure that best meets the forward-looking TELRIC compliant
6 approach.

7
8 Q. DO THE CAPITAL STRUCTURE ACTIVITIES OF VERIZON NEW
9 HAMPSHIRE IMPACT THE CAPITAL STRUCTURE OF VERIZON
10 COMMUNICATIONS?

11 A. Yes. If Verizon New Hampshire issues debt, the debt shows up on the
12 balance sheets of both Verizon New Hampshire and Verizon
13 Communications, Inc. Therefore, as the parent of Verizon New Hampshire,
14 Verizon Communications, Inc. has a vested interest in the level of debt
15 financing done by Verizon New Hampshire. The more debt financing done
16 by Verizon New Hampshire, the more equity Verizon Communications, Inc.
17 must have to keep its consolidated balance sheets in the desired capital
18 structure ratios.

19
20 Q. DOES VERIZON NEW HAMPSHIRE SELL ANY OF ITS OWN
21 COMMON STOCK TO THE PUBLIC?

22 A. No. All of the common equity of Verizon New Hampshire is owned by
23 Verizon Communications, Inc. All of the common equity of Verizon New
24 Hampshire is raised by Verizon Communications, Inc.

25

1 Q. IF VERIZON NEW HAMPSHIRE NEEDS MORE COMMON EQUITY,
2 DOES THIS MEAN VERIZON COMMUNICATIONS WILL RAISE
3 MORE EQUITY AND INVEST THAT EQUITY IN VERIZON NEW
4 HAMPSHIRE?

5 A. No. When Verizon New Hampshire needs new equity investment so that it
6 has the capital for future operations, it can only obtain that new equity
7 investment from Verizon Communications. However, in order to obtain the
8 funds to make the new equity investment in Verizon New Hampshire,
9 Verizon Communications often has raised the money from investors by
10 issuing debt, not equity. It is only through the internal bookkeeping process
11 that Verizon Communications debt can appear as if it were equity when it
12 gets to the books of Verizon New Hampshire.

13 To elaborate, this is because when Verizon Communications makes
14 an equity investment in Verizon New Hampshire, the investment appears on
15 Verizon's internal books as if it were an equity investment whether or not the
16 real source of the investment was debt or was equity.

17 Significantly, debt capital that is used to finance Verizon
18 Communications equity investment in Verizon New Hampshire only appears
19 as equity on the internal books of Verizon New Hampshire. Once the balance
20 sheet of Verizon New Hampshire is consolidated with Verizon
21 Communications other subsidiaries to form the consolidated balance sheet of
22 Verizon Communications, Inc., the portion of the equity on the books of
23 Verizon New Hampshire that was actually financed with Verizon
24 Communications debt is removed from the total combined common equity
25 balance of Verizon Communications, Inc. However, if the only source of
26 "equity" at the subsidiaries owned by Verizon Communications, Inc. were
27 actually the common equity of Verizon Communications, Inc. (either equity

1 raised by Verizon Communications, Inc. through stock sales or the retention
2 of earnings), then the sum of the equity of the subsidiaries owned by Verizon
3 Communications would have no more equity than the sum of the total
4 common equity balance of all of its subsidiaries. In this case, when the sum
5 of the common equity balances of the subsidiaries of Verizon
6 Communications are added together, the total equity is considerably more
7 than the total consolidated equity of Verizon. Because the sum of the equity
8 of the subsidiaries is more than the total equity on the books of Verizon
9 Communications, it is therefore apparent that Verizon Communications has
10 used its internal bookkeeping methods to re-categorize debt as equity for
11 purposes of reporting the capital structure of its subsidiaries.

12

13 Q. IF VERIZON COMMUNICATIONS USES ITS FUNDS TO BUY BACK
14 COMMON STOCK, WHAT IMPACT DOES THAT HAVE ON ITS
15 COMMON EQUITY BALANCE?

16 A. If Verizon Communications uses its funds to repurchase common stock, this
17 represents a transfer of funds from the company back to those stockholders
18 that decided to sell stock back to Verizon. The effect of such a transaction is,
19 other things being equal, for the level of common equity in the capital
20 structure to decline so there would be a higher percentage of debt rather than
21 equity in the capital structure. Company management uses stock buybacks to
22 control the amount of common equity on the company's balance sheet.
23 However, because of the accounting procedures selected by Verizon
24 Communications, stock buybacks that lower the level of common equity on
25 the books of Verizon Communications, Inc. have no influence whatsoever on
26 the level of common equity reported on the books of a subsidiary such as
27 Verizon New Hampshire for the reasons stated above.

1

2 Q. HAS THE COMPANY ACKNOWLEDGED THAT A STOCK BUYBACK
3 THAT REDUCES THE LEVEL OF COMMON EQUITY ON THE BOOKS
4 OF VERIZON COMMUNICATIONS, INC HAS NO IMPACT ON THE
5 BOOKS OF THE SUBSIDIARIES OWNED BY VERIZON
6 COMMUNICATIONS?

7 A. Yes. In response to BR/Conv. 2-7 the Verizon New Hampshire answered
8 “no” to the question “If Verizon Communications were to implement a stock
9 buyback, would this impact the balance sheet of Verizon New Hampshire.”
10 This is the answer given even though a stock buyback in reality represents a
11 reduction in the level of common equity actually obtained from equity
12 investors.

13

14 Q. IS VERIZON COMMUNICATIONS ABLE TO USE LESS COMMON
15 EQUITY IN ITS OTHER BUSINESSES BECAUSE THE HIGHER
16 EQUITY RATIOS AT ITS SUBSIDIARIES SUCH AS VERIZON NEW
17 HAMPSHIRE?

18 A. Yes. Therefore, unless regulators are thorough enough to see through to the
19 true capital structure dynamics, Verizon Communications has an incentive to
20 keep more equity on the balance sheet of Verizon New Hampshire than is
21 needed. By so doing, it could possibly increase the revenues it is allowed to
22 earn on its regulated operations while still maintaining the full benefit of the
23 regulated subsidiary equity for its unregulated operations.

24

1 Q. IS IT GENERALLY ACCEPTED THAT BUSINESS RISK IMPACTS THE
2 PERCENTAGE OF BOOK EQUITY IN THE CAPITAL STRUCTURE
3 THAT A COMPANY SHOULD USE?

4 A. Yes.

5
6 Q. HAS THE CAPITAL STRUCTURE OF VERIZON NEW HAMPSHIRE
7 BEEN ESTABLISHED IN A FULLY ARMS-LENGTH MANNER?

8 A. No. Verizon New Hampshire does not have any publicly outstanding
9 common stock. All of the publicly sold equity resides at the Verizon
10 Communications consolidated level. Therefore, at this level it is at least
11 possible that the actual capital structure reflects the capital structure that
12 Verizon management believes will produce the lowest overall cost of capital.

13

14 Q. IS THE ACTUAL CAPITAL STRUCTURE OF VERIZON
15 COMMUNICATIONS ALSO INFLUENCED BY BOTH THE NEW
16 HAMPSHIRE REGULATED AND THE OTHER BUSINESS ACTIVITIES
17 OF VERIZON, BOTH REGULATED AND UNREGULATED?

18 A. Yes. Since the New Hampshire intrastate UNE operations of Verizon are at
19 the lower side of the risk spectrum, the higher risk of the remainder of
20 Verizon Communications businesses will put upward pressure on the level of
21 common equity in the capital structure. Therefore, whatever percentage of
22 common equity in the capital structure that is appropriate for Verizon
23 Communications as a whole will overstate the level of common equity in the
24 capital structure that is proper for the New Hampshire intrastate regulated
25 operations. Thus, my recommendation of using the consolidated capital
26 structure of Verizon Communications, Inc. as the capital structure for
27 computing the actual earnings of Verizon New Hampshire's regulated

1 intrastate operations and the cost of capital for Verizon New Hampshire
2 should be viewed as a conservatively high level of common equity.
3

4 Q. WHEN YOU COMPUTED THE CAPITAL STRUCTURE OF VERIZON
5 COMMUNICATIONS, DID YOU USE THE ACTUAL ACCOUNTING
6 VALUE COMMON EQUITY OR THE MARKET VALUE OF COMMON
7 EQUITY?

8 A. I used the accounting book value. The accounting book value is the proper
9 value to use when evaluating how management actually raises capital, and
10 how trade-off computations are made to determine the overall cost of capital.
11 Because management is continually managing its capital structure, it is a
12 reasonably accurate look at what management believes is Verizon
13 Communications most economical capital structure. However, as previously
14 stated, since current interest rates are lower than embedded interest rates, as
15 historical debt is replaced with current debt, this will drive down the
16 company's interest cost. The lower interest cost will drive up the amount of
17 debt the company can prudently carry. Therefore, in the current environment,
18 using the accounting book value capital structure produces a conservatively
19 high estimate of the forward-looking percentage of common equity in the
20 capital structure.
21

22 Q. IS THE ACCOUNTING BOOK VALUE APPROACH YOU ARE USING
23 CONSISTENT WITH STANDARD PRACTICE BY STATE
24 REGULATORS?

25 A. Yes. I have been involved in numerous utility rate proceedings in throughout
26 the United States for decades. In ALL of those cases in which I have testified
27 where a capital structure was determined, the various utility commissions

1 have determined the capital structure based upon the accounting book value
2 of the company's capital, not its market value as described below. In fact, the
3 use of the accounting book values to determine capital structure is rarely even
4 made an issue. Moreover, for the same reasons that it is improper to use
5 market value capital structure for traditional ratemaking, it is also improper to
6 use a market value capital structure for a forward-looking capital structure
7 determination as explained below and in my Rebuttal Testimony.

8
9 Q. HOW DOES THE MARKET VALUE APPROACH TO DETERMINING
10 CAPITAL STRUCTURE DIFFER FROM USING THE ACCOUNTING
11 BOOK VALUE?

12 A. For determining capital structure, a large difference would generally be
13 caused by using the market price of the common stock rather than the actual
14 investment made in the company by investors. The book value investment
15 fully reflects the actual investment made by equity investors in a company
16 because it includes both the original invested capital and retained earnings.
17 The market value of the common stock is simply the stock price multiplied by
18 the number of shares outstanding.

19
20 Q. IF THE MARKET VALUE OF CAPITAL RATHER THAN THE BOOK
21 VALUE OF CAPITAL WERE USED TO DETERMINE CAPITAL
22 STRUCTURE, WOULD THERE BE ANY OTHER NECESSARY
23 CHANGES?

24 A. Yes. If the Commission were to use a market value capital structure
25 approach, then this would mean that it would be including increases or
26 decreases in the stock price as part of the funds provided by investors. If
27 increases (or decreases) in common equity are included in the capital

1 structure determination, then increases (or decreases) in the stock price would
2 also have to be included as part of the income included on the company's
3 income statement.

4
5
6 Q. IS CAPITAL STRUCTURE AN IMPORTANT CONSIDERATION IN THE
7 BOND RATING PROCESS?

8 A. Yes.

9
10 Q. WHAT CAPITAL STRUCTURE DO RATING AGENCIES SUCH AS
11 MOODYS AND STANDARD AND POOR'S USE WHEN EVALUATING
12 THE BOND RATING?

13 A. They use the actual book capital structure, not the market value capital
14 structure.

15
16 Q. IS THE MARKET BASED CAPITAL STRUCTURE OF ANY USE
17 WHATSOEVER?

18 A. A market based capital structure has no use in determining the overall cost of
19 capital because it does not show how company management would raise
20 capital *if they were raising all of the capital today for future use*. While a
21 regulated company has the responsibility to provide safe and adequate service
22 at the lowest possible cost, a competitive company must do this also in order
23 to effectively compete and an important cost that these telecommunications
24 companies both incur (i.e., whether or not they are regulated) is the cost of
25 capital. The cost of capital can be minimized by properly selecting the mix of
26 debt and equity. Equity costs more than debt, especially after considering that
27 (unlike debt) the return on equity requires an allowance for income taxes.

1 However, if too little equity is used, then the cost of debt and the cost of
2 equity both increase. Rating agencies not only influence the cost of debt but
3 also tend to reflect the way that bond investors think. Rating agencies
4 examine book value capital structures when evaluating a capital structure's
5 appropriateness for any particular rating. Furthermore, book value capital
6 structures are an important barometer of cash flow because depreciation
7 expense is a function of a company's book value capital structure, not its
8 market value capital structure. Depreciation expense is an important source
9 of cash flow to a company, and cash flow is yet another important
10 determinant of a bond rating.

11 Moreover, since the TELRIC standard is used to arrive at the forward-
12 looking capital structure that should be in-place today and since management
13 uses book value rather than market value ratios to design the capital structure,
14 the re-evaluation of what capital structure management should use is best
15 determined by examining what capital structure management is indeed using.
16 The current capital structure is much more than just an appendage of history
17 as through tools such as dividend policy, repurchasing new stock or selling
18 new stock, repurchasing debt or selling new debt, and using short-term debt
19 lines of credit. The company has substantial control over what is its current
20 book value capital structure. Conversely, a market value capital structure is
21 not used by rating agencies, is not the forward-looking capital structure used
22 by management to decide whether the next sale of capital should be debt or
23 equity, and is therefore not indicative of the capital structure that management
24 would use to decide how to fund a new UNE investment today or in the near
25 future.

1 Q. HAVE OTHER JURISDICTIONS FOUND THAT IT IS PROPER TO USE
2 THE VERIZON CONSOLIDATED CAPITAL STRUCTURE?

3 A. Yes. In BPU Docket No. TO00060356, the New Jersey Board of Public
4 Utilities (BPU) determined that it was proper to use the consolidated capital
5 structure of Verizon Communications when determining the UNE rates that
6 Verizon New Jersey was permitted to charge. In this determination, the BPU
7 specifically adopted my recommendation to use a capital structure containing
8 38.47% common equity, 8.82% short-term debt, 52.12% long-term debt and
9 0.59% preferred stock. It also adopted my recommendation to use a 10.0%
10 cost of equity. Since the time I prepared my 10.0% recommendation in the
11 Verizon New Jersey case, the cost of debt has declined, which strongly
12 indicates that the cost of equity has likely also declined.

13

14 Q. WAS THE USE OF THE VERIZON CONSOLIDATED CAPITAL
15 STRUCTURE CONSISTENT WITH THE BPU'S PRIOR METHOD FOR
16 REGULATING VERIZON NEW JERSEY?

17 A. No. In prior cases, the BPU had used the Verizon New Jersey capital
18 structure, however, the use of the Verizon New Jersey capital structure was
19 from a time prior to when bond rating agencies made it clear that they use the
20 consolidated capital structure when determining the bond ratings of
21 telecommunications subsidiaries such as Verizon New Jersey or Verizon New
22 Hampshire.

23

24 Q. WHAT FIRM AUDITS VERIZON COMMUNICATIONS?

25 A. According to the 2001 10K of Verizon Communications, Inc., the books are
26 audited by PricewaterhouseCoopers, LLP.

27

1 Q. ARE YOU AWARE OF ANY STATEMENTS FROM VERIZON'S
2 AUDITORS ABOUT THE APPLICABILITY OF A SUBSIDIARY
3 BALANCE SHEET?

4 A. Yes. Prior to the merger to form PricewaterhouseCoopers, LLP, Price
5 Waterhouse was hired to advise the Long Island Power Authority regarding
6 its proposed takeover of some of the electric utility assets of Long Island
7 Lighting Company. In this context, Elizabeth M. McCarthy, Partner of the
8 accounting firm Price Waterhouse, stated in a presentation to a meeting of the
9 Board of Trustees of the New York State Long Island Power Authority on
10 June 11, 1997, that:

11 whenever you have a situation where you have a holding company, it
12 is important to have provision for hypothetical cap structure **because**
13 **a holding company can capitalize its operating companies any**
14 **way it wants**, a hundred percent equity or anything else in between, a
15 hundred percent debt or anything else in between.²

16
17 (Emphasis added.)

18

19 Q. IS THE CAPITAL STRUCTURE YOU HAVE RECOMMENDED
20 EQUALLY APPLICABLE TO UNEs AS IT IS TO REGULATED RETAIL
21 RATES?

22 A. Yes. The Verizon Communications, Inc. capital structure that I have
23 recommended is financing all of the operations of Verizon. Both Verizon's
24 regulated retail rates and its UNE investment have a lower than average risk,
25 as discussed later in my testimony. Therefore, a conservatively high

² A transcript of the entire trustee meeting of June 11, 1997 is available on the website of the Long Island Power Authority at www.lipa.state.ny.us. The referenced quote appears on page 95 of the transcript.

1 allocation of equity capital results from using the Verizon Communications
2 consolidated capital structure.

3 **VI. COST OF DEBT**

4
5 Q. HOW HAVE YOU DETERMINED THE COST OF DEBT IN THIS
6 PROCEEDING?

7 A. Since the cost of capital that is being sought in this proceeding is the forward-
8 looking cost of capital, the cost of long-term debt was determined by setting it
9 equal to what it would cost Verizon New Hampshire to issue debt today.
10 That cost rate is currently estimated to be 6.43%. I obtained the 6.43% by
11 starting with the 5.98% cost of Aaa rated corporate debt as reported on the
12 BondsOnline website. I then added the 0.45% interest rate spread (again
13 from the BondsOnline website) between Aaa and A2 rated corporate debt.
14 This resulting 6.43% was then compared to the actual cost of a Verizon New
15 York non-callable bond that matures on 4/1/2032. The yield to maturity on
16 this bond is 6.325%, a number that confirms the reasonability of using the
17 6.43% interest rate I obtained based upon the spread analysis. Verizon New
18 York was used because that was the only long-term bond issued by a Verizon
19 regulated telephone company that was reported in BondsOnline.

20 The cost of short-term debt was set to 2.0% based upon Verizon New
21 Hampshire's response to BR/Conv. 1-29. The cost of debt that I have
22 proposed is TELRIC compliant because it reflects forward-looking costs and
23 it is the cost of debt that would be incurred by a company that were now
24 purchasing all new equipment.

1 **VII. COST OF COMMON EQUITY**

2 **A. Introduction**

3

4 Q. HOW DID YOU DETERMINE THE COST OF EQUITY, AND WHAT
5 WERE YOUR FINDINGS?

6 A. I determined the cost of equity to Verizon New Hampshire by applying the
7 Discounted Cash Flow (DCF) method and the risk premium/capital asset
8 pricing model (CAPM) method to a group of telecommunications companies
9 consisting of the four former RBOC's. I excluded Qwest from the group
10 because of what Value Line describes as "an ongoing criminal investigation
11 by the SEC."³ The results were placed into context by applying the DCF
12 method to a group of electric companies, a group of gas distribution
13 companies, and a group of water utility companies.

14 Based upon the analyses I conducted, I find that the cost of equity to
15 Verizon New Hampshire and applicable to the consolidated capital structure
16 of Verizon Communications is 10.00%. See JAR Exhibit 3, Schedule 2.
17 This recommendation is equally applicable to UNE rates and to the regulated
18 retail rates. Because the capital structure of Verizon Communications
19 contains 31.74% common equity, it has a greater financial risk than either
20 SBC or BellSouth. Therefore, my recommended cost of equity includes a
21 0.50% allowance for this higher financial risk.

22

23

³ Value Line Investment Survey, October 4, 2002, at 735.

1 Q. HOW HAVE YOU IMPLEMENTED THE DCF METHOD AND THE RISK
2 PREMIUM/CAPM METHOD IN THIS CASE?

3 A. The details of how these methods were implemented are provided in JAR
4 Exhibit 2 of this testimony.

5

6 Q. WHAT IS THE COST OF EQUITY?

7 A. The cost of equity is the rate of return that must be offered to a common
8 equity investor in order for that investor to be willing to buy the common
9 stock. The rate of return is earned in two different ways. One part of the
10 return is from a dividend. The other part of the return is through the change
11 in the stock price. Investors buy stock to benefit from the total return. Total
12 return is the sum of the dividend income and the profit (or loss) obtained
13 from the change in the stock price. While it is uncommon in the utility
14 industry, many companies do not pay a dividend at all. Yet, investors are
15 willing to buy the stock if they feel that the likely capital appreciation will
16 offset the lack of any dividend income. Common equity investors do not
17 know with certainty what the stock price will be in the future. Also, investors
18 are not certain at what rate future dividends might be increased or decreased.
19 They also recognize that the possibility exists that dividends could be totally
20 eliminated. Therefore, common equity investment always entails risk, but the
21 risk can vary greatly from company to company.

22 The above description of the cost of equity might sound to some like a
23 description of the DCF method because it talks about dividend yield and
24 stock price appreciation. Perhaps a major part of the reason that the DCF
25 method has been so commonly used over the years is because, more than any
26 other method, it directly examines these factors that provide the incentive for

1 investors to buy common stock in the first place. The DCF method starts
2 with the current dividend yield, and adds to that dividend yield an estimate of
3 growth to arrive at the estimated cost of capital. This growth is really the
4 estimate of the future capital appreciation that investors are expecting.
5 Dividend growth, book value growth, and earnings growth, to the extent they
6 may be used, are only relevant to the degree they can help estimate stock
7 price appreciation.

8 The risk premium method, which in a generic sense includes the
9 CAPM method, is also commonly used by witnesses in rate proceedings. The
10 risk premium/CAPM method is really measuring the very same thing as the
11 DCF method --- the total return expected by a common stock investor. Only
12 rather than determining this total return by directly estimating future
13 dividends and capital appreciation, the method is looking to either interest
14 rates or the inflation rate to help estimate what total return common stock
15 investors want.

16 The return an investor cares about is best measured as the return on
17 market price. An investor who buys a common stock at \$10.00 per share and
18 sells it a year later for \$10.90 will have received a 9% return (plus dividends,
19 if any) irrespective of whether or not the company earned any money, and
20 irrespective of the return on book value. However, utility commissions have
21 the responsibility of balancing the interests of investors and ratepayers.
22 Therefore, if it can be determined that investors are willing to buy stock with
23 the EXPECTATION of being able to earn an annual return of 9%, then a
24 commission should set rates so that the return on used and useful rate base is
25 at the level where the future return on book value is expected to be 9%. If the
26 market price should happen to be below book value, this would NOT be
27 justification for providing a lower return than the cost of equity demanded by

1 investors. If the market price should happen to be above book value, this
2 would NOT be justification for providing a higher return than the cost of
3 equity demanded by investors. As the U. S. Supreme Court found in its
4 decision in the Hope Natural Gas case (320 US 591-660), the stock price is
5 "... the end product of the process of rate-making not the starting point..."
6 and that "... the fact that the value is reduced does not mean that the
7 regulation is invalid."

8
9 **B. Summary of Conclusions on Cost of Equity**

10
11 Q. WHAT IS THE COST OF EQUITY TO APPLY TO VERIZON-NH'S UNE
12 INVESTMENT?

13 A. The forward-looking cost of equity to Verizon is currently 10.00%. This is
14 based upon the results of both the DCF method and the risk premium/CAPM
15 method. See Schedule JAR Exhibit 2. The growth rate derived in the DCF
16 method gave some weight to analysts forecasts even though those forecasts
17 are more optimistic than the consensus of equity investors. Equity investors
18 have suffered through approximately three years of bad times caused at least
19 in part by a continual string of earnings disappointments particularly in the
20 telecommunications industry.

21
22 Q. HOW DID YOU ARRIVE AT YOUR RECOMMENDED COST OF
23 EQUITY?

24 A. I reviewed the results of the DCF methods shown in JAR Exhibit 3, Schedule

1 2. The results shown in JAR Exhibit 3, Schedule 2 were developed from the
2 Discounted Cash Flow, or DCF, method and the risk premium/CAPM
3 method. I applied only the constant growth version of the DCF method.

4 The DCF cost of equity to comparative telephone companies is
5 indicated to be 9.12% to 10.23% depending upon whether average or end of
6 period stock prices are used. These results were confirmed by examining the
7 cost of equity indicated for a comparative groups of electric companies, a
8 comparative group of gas companies, and a comparative group of water
9 companies. Electric, gas and water companies were used for comparative
10 purposes because they provide additional insights into the cost of equity of
11 regulated companies. Telecommunications companies all have significant
12 unregulated businesses that are likely to have a higher cost of equity than the
13 cost of equity for the regulated portion of the telecommunications company's
14 business.

15 As also shown on the bottom of JAR Exhibit 3, Schedule 2, the risk
16 premium/CAPM method is indicating a cost of equity of 7.97%. I have
17 interpreted the results to be indicating a cost of equity of 9.0% for telephone
18 companies. I arrived at this result by giving primary weight to the results of
19 the DCF analysis as applied to BellSouth, SBC, and Verizon. The DCF
20 method is likely overstating the cost of equity due to the skepticism investors
21 have for analyst's forecasts, especially for telecommunications forecasts.
22 However, less weight was given to the risk premium/CAPM method because
23 in the current financial marketplace, it might be understating the cost of

1 equity due to the increased desirability of bond investments caused by the
2 protracted downtrend in the stock market. The results of the electric
3 companies, gas companies, and water companies are only shown to confirm
4 the reasonability of the result I obtained for the telephone companies.

5 **VIII. UNE RISK**

6 Q. HOW DOES THE RISK ASSOCIATED WITH VERIZON NEW
7 HAMPSHIRE'S INVESTMENT IN THE UNE BUSINESS COMPARE
8 WITH THE RISK BORNE BY IT IN THE REGULATED RETAIL RATE
9 BUSINESS?

10 A. The risk associated with Verizon New Hampshire's provision of UNE service
11 is lower than the risk associated with the investment in retail regulated
12 telephone rates. As a result, Verizon's investment that is allocated to its
13 UNE business requires a lower return than the cost of capital to the regulated
14 retail business and the regulated retail business requires a lower rate of return
15 than the consolidated Verizon Communications, Inc or the other RBOCs in
16 the comparative group of telecommunications companies. Due to the
17 speculative nature of quantifying actual risk differentials, I have not
18 recommended a lower return for the UNE business than for the regulated
19 retail business. It requires a lower return, but I have recommended that the
20 Verizon overall cost of capital be applied to Verizon New Hampshire's UNE
21 investment. This recommendation is generous to Verizon New Hampshire, in
22 that it tends to overstate the overall cost of capital to be applied in this case.

23 [BEGIN PROPRIETARY ***
24 [REDACTED]
25 [REDACTED]
26 [REDACTED]

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*** END PROPRIETARY]

- Q. WHY IS THE RISK OF VERIZON’S REGULATED RETAIL BUSINESS LOWER THAN THE RISK FOR VERIZON COMMUNICATIONS, OR FOR THE COMPARATIVE GROUP OF RBOCS?
- A. The regulated retail business has, in the words of the U. S. Supreme Court an:
- almost insurmountable competitive advantage not only in routing calls within the exchange, but, through its control of this local market, in the markets for terminal equipment and long-distance calling as well. A newcomer could not compete with the incumbent carrier to provide local service without coming close to replicating the incumbent’s entire existing network, the most costly and difficult part of which would be laying down the ‘last mile’ of feeder local loop, to the thousands (or millions) of terminal points in individual houses and businesses... In an unregulated world, another telecommunications carrier would be forced to comply with these conditions, or it could never reach the customers of a local exchange.”⁴
- The combination of the “insurmountable” difficulty of competitors building facilities to compete with the regulated retail business and the basic, important nature of telecommunications service makes the retail regulated

⁴ Verizon v. FCC, 122 S. Ct. 1646, 1662 (May 13, 2002).

1 portion of Verizon Communications business in the low-end of the spectrum
2 of risk. It is lower in risk than Verizon Communications' other businesses
3 that do have competition where the barriers to entry are surmountable, and
4 the service might serve a less basic need.

5
6 Q. WHY DO YOU SAY THAT THE UNE BUSINESS OF VERIZON NEW
7 HAMPSHIRE IS EVEN LOWER IN RISK THAN THE RISK BORNE BY
8 THE RELATIVELY LOW-RISK REGULATED RETAIL TELEPHONE
9 BUSINESS?

10 A. The UNE business is only being provided by Verizon-New Hampshire if the
11 facilities to provide that business are already available. When asked in
12 interrogatory BR/Conv.1-10 part (c) "Has Verizon specifically made a
13 separate network investment to provide UNEs to CLECs that would not have
14 been made except for the need to service CLECs?" Verizon New Hampshire
15 answered, "no". Therefore, Verizon New Hampshire has not put any
16 investment capital at risk to service UNEs. UNEs are only offered if the
17 equipment to service them was there already. Without having made any
18 investment, any income derived from servicing the UNEs is a return achieved
19 by Verizon New Hampshire without the company having put any additional
20 capital at risk.

21 The UNE business actually REDUCES the risk of Verizon being in
22 the regulated retail telephone business. As explained by the U.S. Supreme
23 Court:

24
25 The actual TELRIC rate charged to an entrant leasing the element
26 would be a fraction of the TELRIC figure, based on a "reasonable
27 projection" of the entrant's use of the element (whether on a flat or

1 per-usage basis) as divided by aggregate total use of the element by
2 the entrant, the incumbent, and any other competitor that leases it.⁵

3
4 The above quote shows that the UNE rates are based upon the total
5 TELRIC average cost of providing service, while the existence of the UNE
6 business provides economies of scale. See the response to BR/Conv. 2-2.
7 The economies of scale drive down the average cost of not only Verizon New
8 Hampshire's cost to provide UNE service, but also drive down the average
9 cost of the use of the facilities by its regulated retail business. The lower the
10 cost, the better Verizon New Hampshire's regulated business is able to attract
11 more business for the more discretionary services such as extra computer
12 access lines and fax lines.

13 Verizon's investment in UNEs is further protected from risk because
14 if Verizon loses a retail customer to a CLEC, the facilities that the retail
15 customer was using are immediately resold by Verizon as a UNE sale.
16 Hence, Verizon continues to receive revenues for its facilities (although not
17 as much as it would on a retail basis) rather than losing revenues altogether.

18
19 Q. DOES THE LACK OF A LONG-TERM CONTRACT BETWEEN
20 VERIZON AND ITS UNE CUSTOMERS INCREASE VERIZON'S RISK?

21 A. No. It increases the risk borne by its UNE customers because they cannot be
22 secure in the rates, terms and conditions under which they will be able to
23 receive service in the future. But, it does not increase Verizon's risk. Given
24 the "insurmountable" task of a competitor duplicating the UNE services
25 being provided by Verizon New Hampshire, should one wholesale customer

⁵ Verizon v. FCC, 122 S. Ct. at 1665, n.16.

1 for UNEs go out of business, the retail customers serviced by that UNE
2 customer would not be lost to Verizon. The retail customer would either
3 switch to another of Verizon's wholesale customers, or would begin buying
4 service as a direct retail customer of Verizon.

5 It should be noted that the lack of a long-term contract is the result of
6 Verizon's insistence. Moreover, Conversent, who is one of the larger users of
7 Verizon-NH UNEs, would prefer a long-term lease for unbundled interoffice
8 transport including unbundled dark fiber interoffice transport.

9

10 Q. DOES VERIZON NEW HAMPSHIRE RECEIVE ANY PAYMENTS FOR
11 RISK OTHER THAN AS A DIRECT COMPONENT OF THE COST OF
12 CAPITAL ALLOWANCE?

13 A. Yes. Verizon New Hampshire is already being paid an allowance for the risk
14 that much of its equipment will remain unused. As disclosed in the response
15 to BR/Conv. 1-13, the loop facilities have been priced under the expectation
16 that they will only be 37.2% utilized, leaving 62.8% of its lines as paid-for
17 over-capacity to account for unused loops, including any loops that might be
18 lost to competitive bypass. Because the cost of the over-capacity is already
19 built into the charges to its customers, this not only protects Verizon with
20 protection from an over-capacity risk, but should the over-capacity factor
21 increase in the future, in a later rate proceeding it could petition the
22 Commission to adjust its rates to account for its revised over-capacity
23 condition.

24

1 Q. DOES THE REQUIREMENT OF VERIZON NEW HAMPSHIRE TO
2 PROVIDE UNE SERVICE TO ITS COMPETITORS IMPACT THE RISK
3 OF VERIZON NEW HAMPSHIRE?

4 A. Yes, there is a risk to the basic retail telephone business caused by the
5 existence of UNEs. Verizon New Hampshire would undoubtedly prefer to
6 not have the competition to its retail business that is caused by UNEs. But,
7 that risk is not properly allocable to the UNE business, it is allocable to the
8 regulated retail telephone business of Verizon New Hampshire because the
9 regulated retail business must function in a competitive environment. UNEs
10 are just another competitor.

11 Verizon New Hampshire would rather sell retail services than
12 wholesale services like UNEs because providing a retail service gives
13 Verizon New Hampshire an opportunity to provide a greater proportion of the
14 total telecommunications service.

15

16 Q. HOW DOES THE REQUIREMENT TO ESTABLISH UNE RATES
17 BASED UPON FORWARD-LOOKING COSTS, INCLUDING THE
18 PRICING OF SERVICES BASED UPON THE COST OF THE MOST
19 MODERN EQUIPMENT, IMPACT THE COST OF CAPITAL?

20 A. The requirement to establish rates for UNE service based upon forward-
21 looking costs means that instead of assigning the embedded cost of debt to
22 the proper capital structure, the current cost of debt should be used. The use
23 of current costs does not, however, change the appropriate capital structure
24 determination. Just as the cost of capital is determined when establishing
25 regulated retail rates in a traditional rate case, the forward-looking capital
26 structure which is consistent with what management would use in order to

1 minimize the long-run forward-looking overall cost of capital is the proper
2 basis to quantify the overall cost of capital.

3

4 Q. DOES THE USE OF CURRENT EQUIPMENT COST RATHER THAN
5 EMBEDDED EQUIPMENT COST IMPACT THE COST OF CAPITAL
6 RISK ALLOWANCE?

7 A. No. Switching from using an embedded cost procedure to a current
8 replacement cost could involve reconsideration of many factors that are, for
9 the most part, unrelated to the cost of capital. In fact, the only factor that
10 impacts the cost of capital from a forward-looking cost perspective rather
11 than an historic cost perspective is the allowance for inflation. Traditionally,
12 a company's investors are provided with an allowance for inflation through
13 the cost of capital. Cost of capital is a logical place to provide the inflation
14 allowance because investors' demanded return on debt and equity demanded
15 by investors includes an allowance for inflation.

16 Part of the reason that telecommunications equipment changes in
17 price over time is the impact of inflation. Therefore, using the current cost of
18 telecommunications equipment rather than the embedded cost at the same
19 time an allowance for inflation is provided in the cost of capital could result
20 in a double-count. A double-count occurs because the cost of both debt and
21 equity capital already includes an allowance for inflation. An investor can
22 appropriately receive an allowance for inflation either as part of the cost of
23 capital or as part of the inflation in assets, not both. This is conceptually true
24 even in a telecommunications market in which prices for telecommunications
25 equipment are declining. In fact, the prices would be declining more rapidly
26 if there were no inflation.

27

1 Q. HAVE YOU LOWERED YOUR COST OF CAPITAL ESTIMATE TO
2 REMOVE THE DOUBLE-COUNT OF THE ALLOWANCE FOR
3 INFLATION?

4 A. No. The total price of telecommunications equipment is impacted by (1)
5 inflation and (2) technological improvements, which makes the question
6 about how to avoid the double-count for inflation part of a larger picture.
7 That picture includes not only the allowance for inflation, but the proper
8 depreciation rate to use, and how to treat the interrelationship between the
9 cost of the new, most modern equipment versus the embedded cost of older,
10 but partially depreciated equipment. All of these considerations are topics
11 beyond the scope of the cost of capital determination. They are properly
12 treated in the context of the cost of service determination of the UNE rates.

13

14 Q. IS THERE ANY SPECIAL COST OF CAPITAL RISK ASSOCIATED
15 WITH VERIZON NEW HAMPSHIRE'S ABILITY TO RECOVER ITS
16 COST OF SERVICE?

17 A. No. My testimony is based on the expectation that UNE rates have been
18 established at a high enough rate to cover operating and depreciation costs
19 associated with offering UNEs. In fact the Supreme Court decision in
20 Verizon vs. the Federal Communications Commission specifically
21 determined that Verizon's argument was "fundamentally false" because
22 nothing in the TELRIC rules limits the amount of depreciation that a state
23 commission may recognize, noting that the "First Report and Order 702 gave
24 the state commissions considerable discretion. ...specifically permitting more
25 favorable allowances..." for depreciation.⁶ To the extent that there may or

⁶ Verizon v. FCC, 122 S. Ct. at 1651.

1 may not be deficiencies in the way the recovery of investment is computed,
2 the proper place to correct those deficiencies is in the proceeding where they
3 are directly evaluated. It would be wrong to try and repair problems, if any,
4 with the depreciation allowance through a cost of capital adjustment. Using
5 the cost of capital rather than directly evaluating depreciation would result in
6 an imprecise, indirect, and therefore inherently inaccurate method of dealing
7 with the proper depreciation allowance.
8

9 Q. DOES THE PROVISION OF UNES REDUCE AN RBOC'S OVERALL
10 RISK?

11 A. Provisioning wholesale UNE services reduces the risk of the overall portfolio
12 of products and services offered by RBOCs as competitors capture some of
13 the RBOC's market share. The RBOC's investment is hedged because it at
14 least keeps much of the wholesale business through its sales of UNE services
15 that it otherwise might lose to another telecommunications provider that uses
16 its own facilities and does not lease UNEs from the RBOC.
17

18 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

19 A. Yes.

JAR Exhibit 1

Testifying Experience of James A. Rothschild

1

2

JAR EXHIBIT 1

3

Testifying Experience of James A. Rothschild

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**TESTIFYING EXPERIENCE OF JAMES A. ROTHSCHILD
THROUGH NOVEMBER 30, 2002**

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ALABAMA

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ARIZONA

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CONNECTICUT

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28 Connecticut Light & Power Company; Docket No. 88-04-28, Gas Divestiture, August,
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12 Artesian Water Company, Inc.; Docket No. 87-3, Rate of Return, August, 1987
13 Diamond State Telephone Company; Docket No. 82-32, Rate of Return, November, 1982
14 Diamond State Telephone Company; Docket No. 83-12, Rate of Return, October, 1983
15 Wilmington Suburban Water Company; Rate of Return Report, September, 1986
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20 **FEDERAL ENERGY REGULATORY COMMISSION (FERC)**

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23 1997
24 Maine Yankee Atomic Power Company, Docket No. EL93-22-000, Cost of Capital, July,
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28 New England Power Company; Docket No.ER88-630-000 & Docket No. ER88-631-000,
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30 New England Power Company; Docket Nos. ER89-582-000 and ER89-596-000, Rate of
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32 New England Power Company: Docket Nos. ER91-565-000, ER91-566-000 , FASB 106,
33 March, 1992. Rate of Return.
34 Philadelphia Electric Company - Conowingo; Docket No. EL-80-557/588, July, 1983. Rate
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42 Southern Natural Gas, Docket No. RP93-15-000. Rate of Return, August, 1993, and revised
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